

# OWNER'S MANUAL

CDM 1

CDM 2



LISTEN AND YOU'LL SEE

## INTRODUCTION

Thank you for purchasing B&W CDM speakers.

Since its foundation in 1966, the continuing philosophy of B&W has been the quest for perfect sound reproduction. Inspired by the company's founder, the late John Bowers, this quest has entailed not only high investment in audio technology and innovation but also an abiding appreciation of music to ensure that the technology is put to maximum effect.

And it is our policy to make sure the advanced features pioneered on one product are incorporated into others we manufacture.

CDM systems have cabinets with contoured edges for low diffraction, incorporating Kevlar® cone bass/midrange drive units for lowest coloration and maximum definition. They also have alloy dome tweeters with magnetic fluid cooling to ensure good definition to the limits of audibility and maintain dynamics to high sound levels. Additionally, in the case of the CDM 1, the tweeter is free mounted to improve the spaciousness of the stereo image. All these features were originally developed for the acclaimed B&W 800 Series systems and go towards the realisation of fine transducers.

However, no matter how good the speaker itself, it must work well into the listening room and time spent on the installation process will reap the reward of many hours listening pleasure. Please read through this manual fully. It will help you optimise the performance of your audio system.

B&W distribute to over 50 countries world-wide and maintain a network of dedicated distributors who will be able to help should you have any problems your dealer cannot resolve.

## UNPACKING

(figure 1)

Fold the top carton flaps right back and invert the carton and contents.

Lift the carton clear of the contents.

Remove the inner packing from the product.

We suggest you retain the packaging for future use.

Check the carton contains in addition to this user manual:

- One pair of CDM speakers
- One pair of foam plugs

## POSITIONING

(figure 2a)

Some experimentation with the position of the speakers is well worthwhile to optimise the interaction between them and the listening room. However, as an initial guide:

- Place the speakers on firm dedicated stands that place the tweeters at approximately ear level. Stands should be considered as part of the speakers - they affect the sound quality. Ask your dealer for advice on the best type for your needs.
- Place the speakers and the centre of the listening area approximately at the corners of an equilateral triangle.
- Keep the speakers at least 3.5m (5ft) apart to maintain left-right stereo separation.
- Keep the speaker baffles at least 0.5m (20in) clear of walls. Having the speakers too close to walls increases the level of bass relative to the midrange and may give a boomy quality to the sound.

Space behind the speakers also improves the impression of perspective on well recorded material.



## CONNECTIONS

(figure 3)

All connections should be made with the equipment turned off.

There are two pairs of gold plated terminals at the back of each speaker (one pair to the bass/midrange and one pair to the tweeter) which permit bi-wiring or bi-amplification if desired. On delivery, both pairs are connected together by high-quality gold plated copper links for use with a single twin cable. To remove the links, simply loosen the terminal caps.

The use of separate cables to the two drive units can improve the reproduction of low-level detail by reducing interaction in the crossover and allowing optimum choice of cable for each frequency range. When choosing cable, keep its total impedance (out and back) below the maximum recommended in the specification. In particular the cable to the tweeter should have low inductance, otherwise the very high frequencies will be attenuated. Ask your dealer for advice, as the optimum cable will depend on the length required.

The terminals accept bare wires or 4mm (0.16in) dia banana plugs. Connect the positive terminals on the speaker (marked + and with a red band) to the positive terminal on the power amplifier and negative (-, black) to negative. Failure to observe correct polarity will result in poor sound balance and imaging. Make sure the terminal caps are screwed down tight even when using banana plugs, as otherwise they may rattle.

## FINE TUNING

Before fine tuning the installation, double check the polarity and security of the connections.

If the level of bass is uneven with frequency, this is usually due to strong excitation of resonance modes in the room.

Even small changes in the position of the speakers within the listening room can have a profound effect on the perceived sound quality by altering the excitation of these modes. Try mounting the speakers along a different wall. Even moving large pieces of furniture about can have an effect.

If the general level of bass is too high and you cannot move the speakers further from the walls, reduce the port output by inserting the foam plugs provided (figure 4).

If the central image is poor, try moving the speakers closer together or toeing them in so they point at or just in front of the listening area (figure 2b).

If the sound is too harsh, increase the amount of soft furnishing in the room. For example, use heavier curtains. Conversely reduce the amount of soft furnishing if the sound is dull and lifeless.

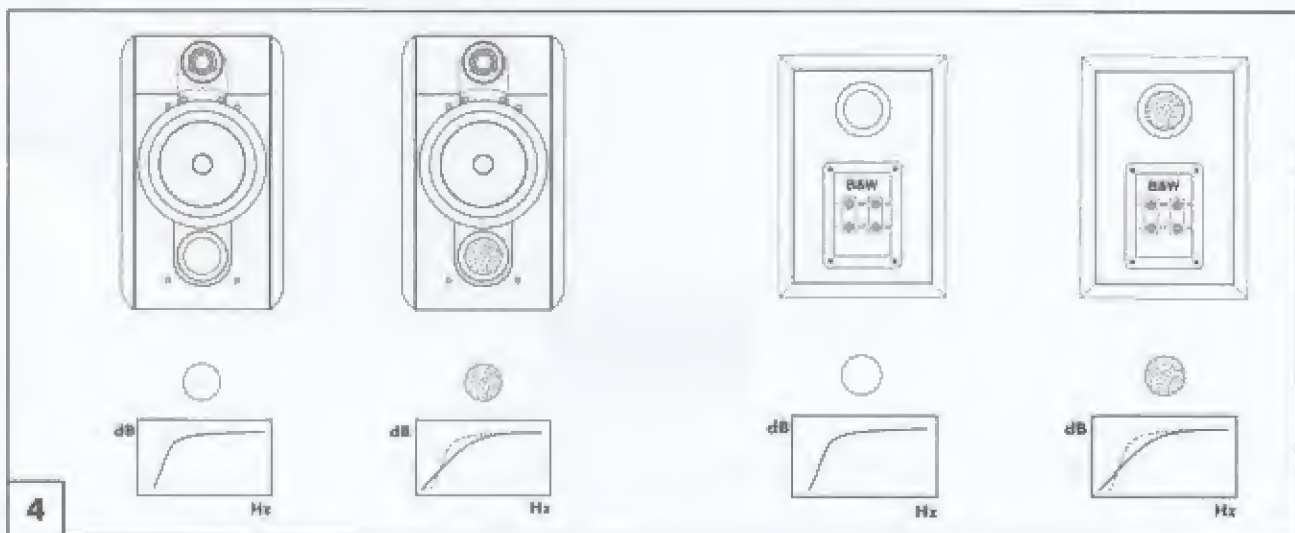
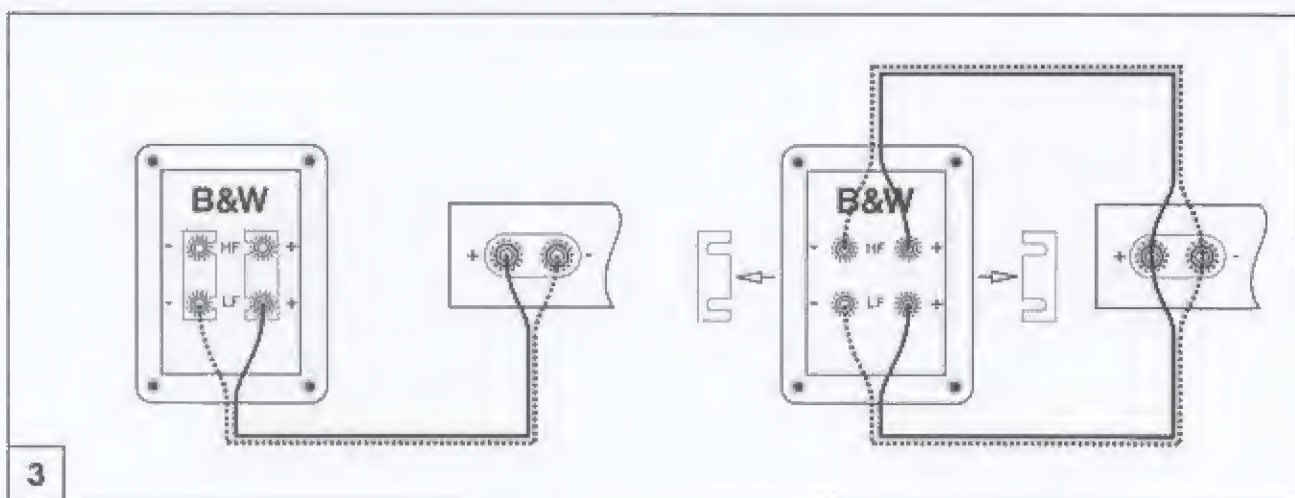
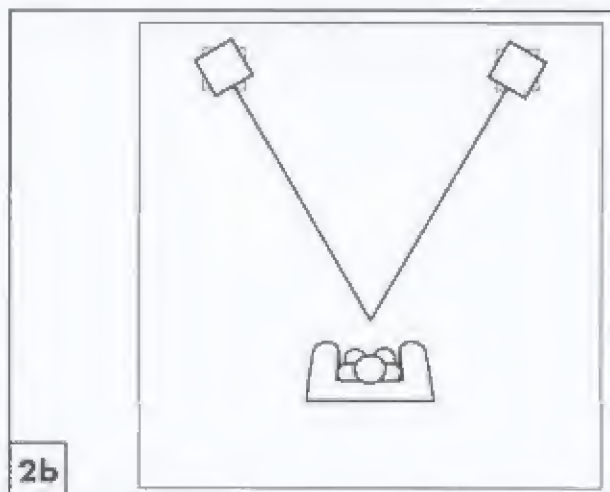
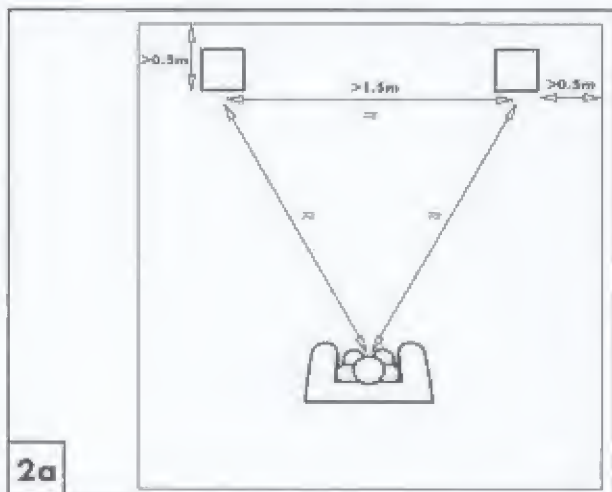
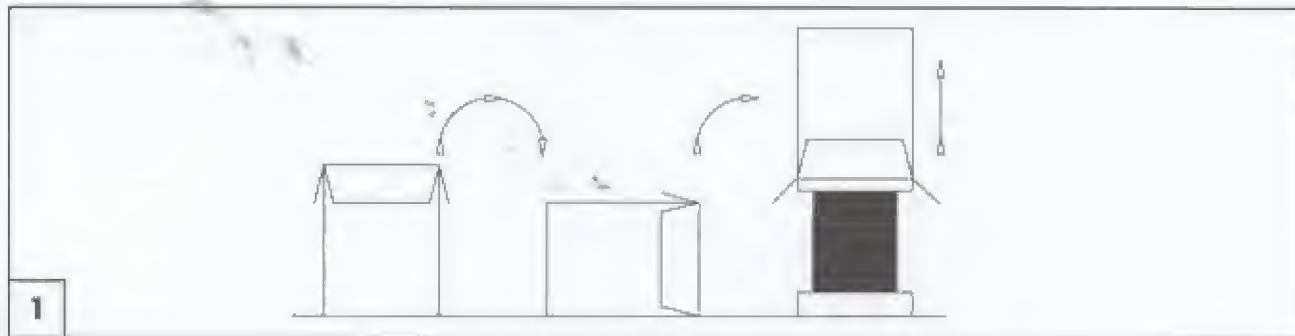
Test for flutter echoes by clapping your hands and listening for rapid repetitions. These can smear the sound, but may be reduced by irregular shaped surfaces such as bookshelves and large pieces of furniture.

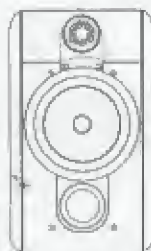
Ensure the speaker stands are firm on the floor. If you have a carpet, use carpet piercing spikes and adjust them to take up any unevenness in the floor surface.

## AFTER CARE

The real wood veneers are lacquer finished and normally only require dusting. If you wish to use an aerosol cleaner, remove the grille first by gently pulling it away from the cabinet. Spray onto the cloth, not directly onto the cabinet. The cloth may be cleaned with a normal clothes brush after removing the grille from the cabinet.

Avoid touching the drive units, especially the tweeter, as damage may result.





## CDM 1

DESCRIPTION	2-way 4th-order vented-box system	
DRIVE UNITS	One 165mm (6 1/2 in) dia bass/midrange with rigid die-cast basket, Kevlar <sup>®</sup> diaphragm and 31mm (1 1/4 in) dia high-power voice coil on Kapton <sup>®</sup> former One free-mounted 26mm (1 in) dia high-frequency with alloy dome, high-power voice coil and magnetic fluid cooling	
FREQUENCY RANGE	-6dB at 46Hz and 25kHz	
FREQUENCY RESPONSE	64Hz-20kHz $\pm 2$ dB on reference axis, free-field conditions	
DISPERSION	Within 2dB of response on reference axis Horizontal: over 40° arc Vertical: over 10° arc	
SENSITIVITY	88dB spl (2.83V, 1m)	
HARMONIC DISTORTION	2nd & 3rd harmonics <1% 100Hz-20kHz (90dB spl, 1m)	
NOMINAL IMPEDANCE	8 $\Omega$ (minimum 4.5 $\Omega$ )	
CROSSOVER FREQUENCY	3kHz	
POWER HANDLING	Suitable for amplifiers with 30-120W output continuous on unclipped speech and music programme.	
MAXIMUM RECOMMENDED CABLE IMPEDANCE	0.3 $\Omega$	
DIMENSIONS	Height:	370mm (14.6in)
	Width:	220mm (8.7in)
	Depth:	274mm (10.8in)
FINISHES	Cabinet:	Real wood veneers of Black Ash or Red Ash
	Grille:	Black Cloth





## CDM 2

DESCRIPTION	2-way 4th-order vented-box system	
DRIVE UNITS	<p>One 165mm (6 1/2 in) dia bass/midrange with Kevlar<sup>®</sup> diaphragm and 31mm (1 1/8 in) dia high-power voice coil on Kapton<sup>®</sup> former</p> <p>One 26mm (1 in) dia high-frequency with alloy dome, high-power voice coil and magnetic fluid cooling</p>	
FREQUENCY RANGE	-6dB at 51Hz and 25kHz	
FREQUENCY RESPONSE	70Hz - 20kHz $\pm 2$ dB on reference axis, free-field conditions	
DISPERSION	<p>Within 2dB of response on reference axis</p> <p>Horizontal: over 40° arc</p> <p>Vertical: over 10° arc</p>	
SENSITIVITY	87dB spl (2.83V, 1m)	
HARMONIC DISTORTION	2nd & 3rd harmonics $\leq 1\%$ 100Hz - 20kHz (90dB spl, 1m)	
NOMINAL IMPEDANCE	8 $\Omega$ (minimum 4.5 $\Omega$ )	
CROSSOVER FREQUENCY	3kHz	
POWER HANDLING	Suitable for amplifiers with 30-120W output continuous on unclipped speech and music programme.	
MAXIMUM RECOMMENDED CABLE IMPEDANCE	0.3 $\Omega$	
DIMENSIONS	Height:	316mm (14.4in)
	Width:	220mm (8.7in)
	Depth:	242mm (9.5in)
FINISHES	Cabinet:	Real wood veneers of Black Ash or Red Ash
	Grille:	Black Cloth

Kevlar and Kapton are registered trade marks of Dupont.

B&W Loudspeakers Ltd. reserves the right to amend details of the specifications in line with technical developments.

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